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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,683	05/24/2006	Kadosa Hevesi	339547US99PCT	2141
22850	7590	02/09/2010	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314			XU, LING X	
			ART UNIT	PAPER NUMBER
			1794	
			NOTIFICATION DATE	DELIVERY MODE
			02/09/2010	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/564,683	<b>Applicant(s)</b> HEVESI, KADOSA	
	<b>Examiner</b> Ling Xu	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1, 18-26 and 28-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 18-26 and 28-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 18-26, and 28-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants amended claim 1, line 14, to recite that "when the transparent substrate is a 6 mm clear soda-lime glass....." It is unclear if applicant intended to claim the transparent substrate to be a 6mm clear solar-lime glass and has the specific properties as recited in claim 1 or the transparent substrate can be any material but when the transparent substrate is a 6 mm clear soda-lime glass, it has the specific properties as recited in claim 1.

### ***Claim Rejections - 35 USC § 102/103***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,18-26, and 28-36 are rejected under 35 U.S.C. 102(b) as anticipated by Boire et al. (US 6,045,890) or, in the alternative, under 35 U.S.C. 103(a) as obvious over Boire et al. in view of Coustet et al. (W0-02/48065, its US equivalent, US 2005/0123772, is used as English translation).

Regarding claims 1, 18-26, 29-32, and 34-36, Boire discloses a glazing assembly such as a double-glazing unit comprising a stack of coating to be placed on the side facing a sandwiched gas-filled cavity within the double-glazing unit (col. 9, lines 1-15). The stack of coating comprises (see Table 3) the following layer structure:

- a second dielectric Si<sub>3</sub>N<sub>4</sub> layer (8b);
- a second absorbent ZnO layer (8a);
- a sacrificial barrier Ti layer (7);
- a second IR reflective Ag layer (6);
- an intermediate layer;
- a first sacrificial barrier Ti layer (4);
- a first IR Reflective Ag layer (3);
- a first absorbent ZnO layer (2b);
- a first dielectric SnO<sub>2</sub> layer (2a);
- a glass substrate layer (1).

The thickness of the Ag layer is about 8-12nm. The total thickness of the Ag layers is about 16-24 nm when there are two Ag layers in the stack. The first absorbent layer has a thickness of 5 to 20 nm (Table 3).

As stated above, it is unclear if (1) the applicant intended to claim the transparent substrate to be a 6mm clear solar-lime glass and has the specific properties as recited in claim 1 or (2) the transparent substrate can be any material but when the transparent substrate is a 6 mm clear soda-lime glass, it has the specific properties as recited in claim 1.

If the claimed transparent substrate can be any material as stated in (2) above, Boire discloses the stack of coating comprising the same structure and materials as claimed, the same coating would also have the same properties as recited in claims 1, 18, 21, 26, 29-32, and 34-35. More specifically, Boire discloses that the light transmission value of the coated glass is from 50-85% and negative value of  $a^*$  and  $b^*$  in external reflection (col. 9, lines 15-35).

In the alternative, if the claimed transparent substrate is a 6mm clear soda-lime glass as stated in (1) above, Boire discloses the use of clear soda-lime glass but does not specify that the glass is a 6mm thick. However, it is well known in the art that the soda-lime glass can be 6mm thick. For example, Coustet teaches the use of 6mm soda-lime glass as a transparent substrate coated with a stack of thin layers consisting of an alternation of  $n$  functional layers having reflection properties in the infrared and/or the solar radiation range and of  $n+1$  coatings composed of one or more layers made of a

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dielectrics (page 3, [0037]) and the coated transparent substrate have similar optical properties as disclosed by Boire.

Accordingly, it would have been obvious to one of ordinary skill in the art to choose the soda-lime glass with desired thickness including the 6mm thickness for Boire's coated transparent substrate and produce a coated transparent substrate with predictable optical properties.

Regarding claim 28, as stated above, Boire discloses the same coated substrate as recited in claim 1. Boire also discloses the transparent substrate coated with the stack of layers. The stack of thin layers comprises  $n$  functional layers having reflection properties in the infrared, in solar radiation or in both, and  $(n+1)$  coatings. The coatings comprise one or more layers, at least one of which is made of a dielectric material. The functional layers and coatings are alternating so that each functional layer is placed between two coatings (page 4, lines 60-67).

Boire also discloses that  $n$  is greater than 1 (i.e.  $n$  can be 1, 2, or more). If  $n$  is 3, the stack of layers comprises at least three infrared reflective layers. The middle (or the second) infrared reflective layer and the two dielectric layers sandwiched the middle infrared reflective layer can be considered as the intermediate layer. Boire meets the limitations of claim 28.

In the alternative, it would have been obvious to one of ordinary skill in the art to make the stack of coating layers disclosed by Boire to have more than 3 functional layers in order to provide more effective optical properties for the stack of coating layers. When  $n$  is greater than 3, the stack of layers comprises at least three infrared

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reflective layers. The second infrared reflective layer and the two dielectric layers sandwiched the second infrared reflective layer can be considered as the intermediate layer.

Regarding claim 33, Boire discloses that the absorbent layer can form part of the coating placed on top of, and directly in contact with, the functional Ag layer (col. 7, lines 5-20).

### ***Response to Arguments***

2. Applicant's arguments filed on 1/8/2010 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling Xu whose telephone number is 571-272-7414. The examiner can normally be reached on 8:00 am- 4:30 pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ling Xu  
Primary Examiner  
Art Unit 1794

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Primary Examiner, Art Unit 1794

Lx  
January 29, 2010



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